BLACK BOX®
NETWORK SERVICES

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FREE 24-hour Tech Support: 724-746-5500
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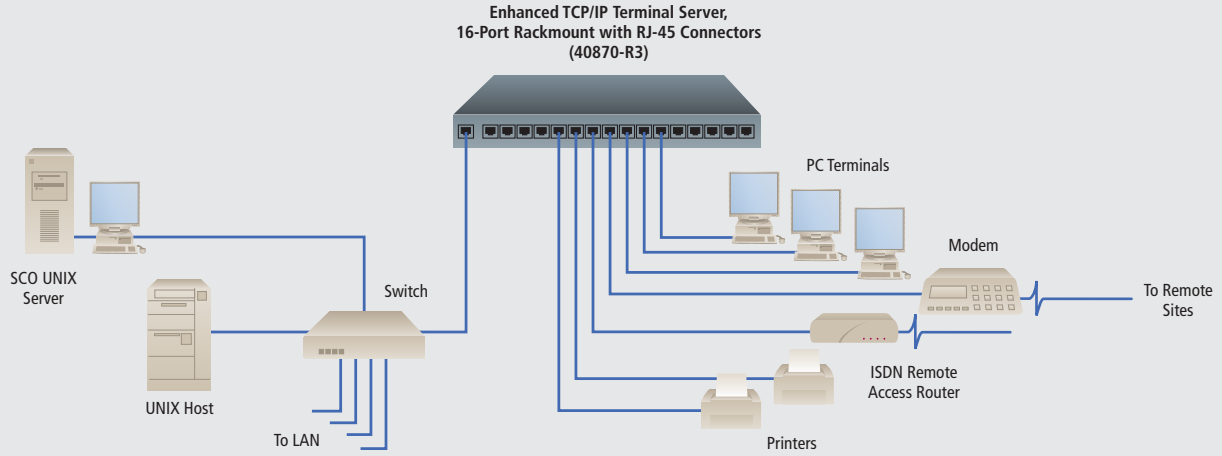
Enhanced TCP/IP Terminal Servers

Attach your PCs, terminals, printers, and especially modems to a terminal server for instant connectivity to your UNIX host.

FEATURES

- **2, 4, 8, or 16 RS-232 serial ports, supporting data rates up to 115.2 kbps.**
- **Available in three chassis: standalone with DB25 RS-232 ports, standalone with RJ-45 RS-232 ports, or rackmount with RJ-45 RS-232 ports.**
- **Instant connection to 10-Mbps Ethernet.**
- **Compatible with all known varieties of UNIX®, plus WINS support for Windows® environments.**

For powerful TCP/IP-based peripheral control and data communication, these terminal servers are hard to beat.



OVERVIEW

Tired of 10-Mbps Ethernet terminal servers that still "don't do" TCP/IP and have no clue how to talk to your UNIX computers?

Our Enhanced TCP/IP Terminal Servers are ready for your network. They come in two 8- or 16-port varieties and one 2- or 4-port variety. The standalone 8- or 16-port version has regular DB25 female RS-232 connectors (pinned as DTE). The rackmount 8- or 16-port version has RS-232 RJ-45 sockets. The standalone 2- or 4-port version has RS-232 RJ-45 sockets. (Both DB25 and RJ-45 ports carry all signals necessary for full modem control; you can use less expensive, more flexible twisted-pair cable with the RJ-45 port.) You can set these ports for any standard data format or flow-control option and for most standard async data rates from 50 bps to 115.2 kbps.

You can attach a network cable to any one (but only one) of the 8- or 16-port terminal server's three Ethernet ports (AUI, ThinNet, or 10BASE-T); it will autosense the connection and establish its network presence immediately.

The terminal servers are compatible with every type of UNIX we've tested them with, including Linux®, SCO® UNIX and Gemini®, AIX®, Solaris®, HP-UX®, DG/UX®, BSD®, IRIX®, and Citrix® Winframe®. All models are also compatible with Windows® 3.x, 95, 98, Windows NT®, and Windows 2000, though some of their important features (such as TFTP and dial-out socket connections) are not yet available under Windows.

Whatever you want to do with TCP/IP, the servers most likely will handle the protocol. They operate with Telnet™ and rlogin for session control; PPP, SLIP, and CSLIP for modem and remote access support; lpd and rcp for printer support; ARP and BOOTP for network-based setup; DNS for internetworking support; and gateway tables for IP-routing support, among others. The servers also fully support SNMP, and they come with proprietary software that includes utilities that extend modem and printer support, add "fixed tty" support for terminals, and process proprietary SNMP variables.

The servers have a pop-up menu system (with on-screen help) that can appear in multiple terminals and in any of five languages (English, French, Spanish, German, or Italian).

Security's assured. The units support supervisor and port passwords; port locking; authentication (including PAP); user access profiles; logging for service, audit, and billing; and modem auto-reset.

Two of the standalone (41872-R3, 41874-R3) and all four of the rackmount terminal servers (40871-R3, 40871-DC-R3, 40870-R3, and 40870-DC-R3) are RoHS compliant.

TECH SPECS

Compliance — All: EMI/RFI: CE (EN55022 Class B), FCC Part 15 Subpart B Class A, IC Class/classe A; Electrical safety: EN 60950, UL® 1950 CSA NRTL/C), C22.2 No. 950;
41872-R3, 41874-R3, 40871-R3, 40871-DC-R3, 40870-R3, 40870-DC-R3: RoHS
Standards — IEEE 802.3 Ethernet, SNAP
Protocols — Serial: Asynchronous;
Network: TCP/IP (including Telnet™ and rlogin), UDP, ICMP, BOOTP discovery user services, TFTP download/upload services, PPP, SLIP, CSLIP, and SNMP (MIB I, MIB II, and proprietary variables)
Data Rate — Serial: 115,200, 57,600, 38,400, 19,200, 9600, 4800, 2400, 1800, 1200, 600, 300, 150, 110, or 50 bps, independently user-selectable for each port;
Network: 10 Mbps
Data Format — Serial: 5, 6, 7, or 8 data bits; even, odd, or no parity; and 1, 1.5, or 2 stop bits; independently user-selectable for each port
Flow Control — Serial: X-ON/X-OFF (software), RTS/CTS (hardware), both software and hardware, WANG® compatible, or none—enabled on either the input side or the output side or both—independently user-selectable for each port
User Controls — All models: Included software; Firmware-based menu and command-line systems;
Standalone models: Side-mounted ON/OFF rocker switch and reset pushbutton;
Rackmount models: Rear-mounted ON/OFF rocker switch and reset pushbutton
MTBF — 50,000 hours at 91.4°F (33°C)
Impact Tolerance — Up to 2 G @ 330 Hz
Interface — All models: Serial: EIA/TIA RS-232 (ITU-T V.24, V.28), DTE;
37688-R2, 37687-R2, 40871-R3, 40871-DC-R3, 40870-R3, 40870-DC-R3: Network: 10BASE5 Thicknet (AUI), 10BASE2 ThinNet, or 10BASE-T, autosensing;
41872-R3, 41874-R3: Network: 10BASE-T
Connectors — 37688-R2: (1) 10/100 RJ-45, (8) serial DB25 F;
37687-R2: (1) 10/100 RJ-45, (16) serial DB25 F;
41872-R3: (1) 10/100 RJ-45, (2) serial RJ-45;
41874-R3: (1) 10/100 RJ-45, (4) serial RJ-45;
40871-R3, 40871-DC-R3: (1) 10/100 RJ-45, (8) serial RJ-45;
40870-R3, 40870-DC-R3: (1) 10/100 RJ-45, (16) serial RJ-45;
All: (1) IEC 320 male power inlet
Indicators — 37688-R2, 37687-R2: (4) Side-mounted LEDs: Power, AUI, BNC, 10BASE-T;
41872-R3, 41874-R3: Front-mounted LEDs: Power, Network, Port Activity: 41872-R3: (2); 41874-R3: (4);
40871-R3, 40871-DC-R3, 40870-R3, 40870-DC-R3: Rear-mounted LEDs: (1) Power, (1) AUI, (1) BNC, (1) 10BASE-T;
Port Activity: 40871-R3, 40871-DC-R3 models: (8);
40870-R3, 40870-DC-R3 models: (16)
Temperature Tolerance — Operating: 41 to 122°F (5 to 50°C);
Storage: -22 to +176°F (-30 to +80°C)
Humidity Tolerance — Operating: 10 to 90% noncondensing;
Storage: 5 to 95% noncondensing
Altitude Tolerance — -500 to +15,000 ft. (-152.4 to +4572 m)
Power — 37688-R2, 37687-R2, 40871-R3, 40870-R3: 100 to 230 VAC, 47 to 63 Hz, at 0.2 amps (115 VAC) or 0.11 amps (230 VAC), from utility-power AC outlet through a detachable power cord to an internal transformer;
41872-R3, 41874-R3: 110 to 230 VAC, 50/60 Hz, autosensing, external;
40871-DC-R3, 40870-DC-R3: 48 VDC;
All models: Consumption: 30 watts maximum;
Thermal Dissipation: 30 milliwatts maximum
Size — 37688-R2, 37687-R2: 1.8"H x 9"W x 12"D (4.6 x 22.9 x 30.5 cm);
41872-R3, 41874-R3: 1.3"H x 9.1"W x 6.4"D (3.3 x 23.1 x 16.3 cm);
40871-R3, 40871-DC-R3, 40870-R3, 40870-DC-R3:
1.7"H x 19.3"W x 11.8"D (4.3 x 49 x 30 cm)
Weight — 37688-R2, 37687-R2: 3.5 lb. (1.6 kg);
41872-R3, 41874-R3: 2.9 lb. (1.3 kg);
40871-R3, 40871-DC-R3, 40870-R3, 40870-DC-R3: 4 lb. (1.8 kg)

37687-R2

Technically Speaking

- Attach a whole bank of modems and have the terminal server function as a front-end processor for your UNIX host's remote data communication.
- Attach a system of RS-232 sensors and data loggers and feed the data through your LAN to your monitoring server running Windows NT.

WHAT'S INCLUDED

- ✦ Enhanced TCP/IP Terminal Server
- ✦ AC power cable (not included for DC versions)
- ✦ 3.5" software diskette
- ✦ (2) mounting brackets (for 40870-R3, 40871-R3, 40870-DC-R3, 40871-DC-R3) or (4) mounting brackets (for 37687-R2, 37688-R2)

NOTE: No mounting brackets are included with the 41872-R3 or 41874-R3.

- ✦ RS-232 loopback-test connector
- ✦ 10BASE-T loopback-test connector
- ✦ User's manual
- ✦ Electrical-safety booklet

Item	Code
Enhanced TCP/IP Terminal Servers	
Standalone with DB25 Connectors	
8-Port	**37688-R2**
16-Port	**37687-R2**
Standalone with RJ-45 Connectors	
2-Port	**41872-R3**
4-Port	**41874-R3**
Rackmount with RJ-45 Connectors	
8-Port	**40871-R3**
8-Port, 48 VDC	**40871-DC-R3**
16-Port	**40870-R3**
16-Port, 48 VDC	**40870-DC-R3**
To adapt the RJ-45 ports for your serial devices, order…	
Serial Adapters	
PC/Terminal DTE (RJ-45 F/DB 9 F)	**FA705**
PC/Terminal DTE (RJ-45 F/DB25 F)	**FA706**
Modem DCE (RJ-45 M/DB25 F)	**FA707**
For modems, you might also want to order…	
Straight-Through Pinned RS-232 Cable, DB25 Male to DB25 Male, 10-ft. (3-m)	**ECM25C-0010-MM**

*NOTE: For PCs, terminals, or printers (DTEs), proper cross-pinning can vary depending on your equipment. To make sure you get the right cable for your application, call Black Box Tech Support at **724-746-5500**.*

Why Buy From Black Box? Exceptional Value. Exceptional Tech Support. Period.

Recognize any of these situations?

- **You wait more than 30 minutes to get through to a vendor's tech support.**
- **The so-called "tech" can't help you or gives you the wrong answer.**
- **You don't have a purchase order number and the tech refuses to help you.**
- **It's 9 p. m. and you need help, but your vendor's tech support line is closed.**

According to a survey by Data Communications magazine, 90% of network managers surveyed say that getting the technical support they need is extremely important when choosing a vendor. But even though network managers pay anywhere from 10 to 20% of their overall purchase price for a basic service and support contract, the technical support and service they receive falls far short of their expectations—and certainly isn't worth what they paid.

At Black Box, we guarantee the best value and the best support. You can even consult our Technical Support Experts before you buy if you need help selecting just the right component for your application.

Don't waste time and money—call Black Box today.